

What is claimed:

1 1. A process for constructing a braided, branched stent having a body and
2 a first and second leg, each of said first and second legs comprising a discrete plurality of
3 filaments, the process comprising the steps of:

4 (a) braiding a first discrete plurality of filaments to form the first leg using
5 a first braiding machine for accommodating at least a first number of bobbin carriers;

6 (b) braiding a second discrete plurality of filaments to form the second leg
7 using said first braiding machine; and

8 (c) braiding the first plurality of filaments and the second plurality of
9 filaments together to form the body using a second braiding machine for accommodating at
10 least a second number of bobbin carriers that is different from said first number.

1 2. The process of claim 1, wherein each bobbin carrier is adapted to hold
2 a bobbin having a filament wound thereon, a first plurality of bobbins is used in step (a), and
3 a second plurality of bobbins equal in number to the first plurality is used in step (b), the
4 process further comprising: performing steps (a) and (b) before step (c); after step (a)
5 transferring the first plurality of bobbins to a first bobbin rack; after step (b) transferring the
6 second plurality of bobbins to a second bobbin rack; and prior to step (c) transferring the
7 first and second plurality of bobbins from the first and second bobbin racks onto the second
8 braiding machine.

1 3. The process of claim 2, wherein said first rack and said second rack
2 are semicircular and, prior to step (c), said first rack and said second rack are joined to form
3 a circular rack.

1 4. The process of claim 1, wherein each bobbin carrier is adapted to hold
2 a bobbin having a filament wound thereon, a first plurality of bobbins is used in step (a), and
3 a second plurality of bobbins equal in number to the first plurality is used in step (b), the
4 process further comprising: performing steps (a) and (b) before step (c); after step (a)
5 transferring the first plurality of bobbins to a first bobbin rack in a first orientation and then
6 to the second braiding machine; after step (b) transferring the second plurality of bobbins to
7 the first bobbin rack in a second orientation and then to the second braiding machine.

1 5. The process of claim 1, wherein each bobbin carrier is adapted to hold
2 a bobbin having a filament wound thereon, a first plurality of bobbins is used in step (a), and
3 a second plurality of bobbins equal in number to the first plurality is used in step (b), the
4 process further comprises: performing step (c) before steps (a) and (b); after step (c)
5 transferring the first plurality of bobbins from the second machine to a first bobbin rack and
6 transferring the second plurality of bobbins from the second machine to a second bobbin
7 rack; prior to step (a) transferring the first plurality of bobbins from the first rack onto the
8 first braiding machine; and prior to step (b) transferring the second plurality of bobbins from
9 the second rack onto the first braiding machine.

1 6. The process of claim 5, wherein said first rack and said second rack
2 are semicircular and, prior to steps (a) and (b), said first rack and said second rack are joined
3 to form a circular rack.

1 7. The process of claim 1 wherein the first number is less than a full
2 capacity of the first braiding machine and the second number is less than a full capacity of
3 the second braiding machine.

1 8. The process of claim 7 wherein each of the first number and the second
2 number are equivalent to a capacity of the respective braiding machine that produces a 1:1
3 braiding ratio.

1 9. The process of claim 8, wherein said first number of bobbin carriers is
2 12 and said second number of bobbin carriers is 24.

1 10. The process of claim 1 wherein each of the first number and the second
2 number are equivalent to a capacity of the respective braiding machine that produces a 1:1
3 braiding ratio.

1 11. A process for constructing a braided, branched stent having a body and
2 a first and second leg, each of said first and second legs comprising a discrete plurality of
3 filaments, the process comprising the steps of:

4 (a) braiding a first discrete plurality of filaments to form the first leg using
5 a first braiding machine for accommodating at least a first number of bobbin carriers;

6 (b) braiding a second discrete plurality of filaments to form the second leg
7 using a second braiding machine for accommodating at least a second number of bobbin
8 carriers; and

9 (c) braiding the first plurality of filaments and the second plurality of
10 filaments together to form the body using a third braiding machine for accommodating at
11 least a third number of bobbin carriers that is different from said first and second numbers.

1 12. The process of claim 11 wherein the first number is equal to the second
2 number.

1 13. The process of claim 11 wherein the third number is equal to the first
2 number plus the second number.

1 14. The process of claim 11 wherein the first number is less than a full
2 capacity of the first braiding machine, the second number is less than a full capacity of the
3 second braiding machine, and third number is less than a full capacity of the third braiding
4 machine.

1 15. The process of claim 14 wherein each of the first number, the second
2 number, and the third number are equivalent to a capacity of the respective braiding machine
3 that produces a 1:1 braiding ratio.

1 16. The process of claim 11 wherein each of the first number, the second
2 number, and the third number are equivalent to a capacity of the respective braiding machine
3 that produces a 1:1 braiding ratio.

1 17. The process of claim 11, wherein each bobbin carrier is adapted to
2 hold a bobbin having a filament wound thereon, a first plurality of bobbins is used in step
3 (a), and a second plurality of bobbins is used in step (b), the process further comprises:
4 performing steps (a) and (b) before step (c); after step (a) transferring the first plurality of
5 bobbins to a first bobbin rack; after step (b) transferring the second plurality of bobbins to a
6 second bobbin rack; and prior to step (c) transferring the first and second plurality of bobbins
7 from the first and second bobbin racks onto the third braiding machine.

1 18. The process of claim 17, wherein said first rack and said second rack
2 are semicircular and, prior to step (c), said first rack and said second rack are joined to form
3 a circular rack.

1 19. The process of claim 11, wherein each bobbin carrier is adapted to
2 hold a bobbin having a filament wound thereon, a first plurality of bobbins is used in step
3 (a), and a second plurality of bobbins is used in step (b), the process further comprising:
4 performing steps (a) and (b) before step (c); after step (a) transferring the first plurality of
5 bobbins to a bobbin rack in a first orientation and then to the third braiding machine; and
6 after step (b) transferring the second plurality of bobbins to a the bobbin rack in a second
7 orientation and then to the third braiding machine.

1 20. The process of claim 11, wherein each bobbin carrier is adapted to
2 hold a bobbin having a filament wound thereon, a first plurality of bobbins is used in step
3 (a), and a second plurality of bobbins is used in step (b), the process further comprises:
4 performing step (c) before steps (a) and (b); after step (c) transferring the first plurality of
5 bobbins from the third braiding machine to a first bobbin rack and transferring the second
6 plurality of bobbins from the third braiding machine to a second bobbin rack; prior to step
7 (a) transferring the first plurality of bobbins from the first rack onto the first braiding
8 machine; and prior to step (b) transferring the second plurality of bobbins from the second
9 rack onto the second braiding machine.

1 21. The process of claim 20, wherein said first rack and said second rack
2 are semicircular and, prior to steps (a) and (b), said first rack and said second rack are joined
3 to form a circular rack.

1 22. The process of claim 15, wherein said first number of bobbin carriers
2 is 12, said second number of bobbin carriers is 12, and said third number of bobbin carriers
3 is 24.